

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

REC'D 10 NOV 2005

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Applicant's or agent's file reference	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP2004/008285	International filing date (<i>day/month/year</i>) 23.07.2004	Priority date (<i>day/month/year</i>) 26.08.2003
International Patent Classification (IPC) or both national classification and IPC A61K7/09		
Applicant UNILEVER PLC et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	<p>This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 3 sheets.</p>
3.	<p>This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

<p>Date of submission of the demand</p> <p>28.01.2005</p>	<p>Date of completion of this report</p> <p>11.11.2005</p>
<p>Name and mailing address of the international preliminary examining authority:</p> <div style="display: flex; align-items: center;"> <div> <p>European Patent Office - P.B. 5818 Patentlaan 2</p> <p>NL-2280 HV Rijswijk - Pays Bas</p> <p>Tel. +31 70 340 - 2040 Tx: 31 651 epo nl</p> <p>Fax: +31 70 340 - 3016</p> </div> </div>	<p>Authorized Officer</p> <p>Menidjel, R</p> <p>Telephone No. +31 70 340-3680</p> <div style="text-align: right;"> </div>

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP2004/008285

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-13 received on 01.02.2005 with letter of 28.01.2005

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☒ the claims, Nos.: 14,15
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-9
	No: Claims	10-13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. The following documents (D1,D3) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: WO 03 026599 A (PROCTER & GAMBLE) 3 April 2003 (2003-04-03)

D3: US-A-3 715 429 (TOBIN J ET AL) 6 February 1973 (1973-02-06)

- The amendments filed by the applicant do not introduce subject-matter which extends beyond the content of the application as filed (Article 34(2)(b) PCT).

2. Clarity (Article 6 PCT)

a - In the wording of claim 1 appears composition comprising: " 1) from...25°C" not followed by other points. It leaves the reader in doubt as to the meaning of the technical features which might be missing, thereby rendering the definition of the subject-matter of said claim 1 unclear (Article 6 PCT).

b - It is clear from the description, e.g. on page 3, lines 3-16, the examples and dependent claim 6, that the following features are essential to the definition of the invention:

(1) A rinse off hair treatment composition comprising two salts from the group consisting of sodium sulphate and sodium thiocyanate, sodium sulphate and sodium tartrate, sodium thiocyanate and sodium tartrate.

(2) surfactants

(3) Anionic Cleansing surfactant

(4) Cationic polymer

(5) Fatty materials

Since independent claims 1,10-13 do not contain these features, they do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

c - The subject-matter of claim 7 is already mentioned as one possibility in claim 6.

- As far as the claimed subject-matter can be understood in view of the unclarities mentioned above, the following is to be noted concerning novelty and inventive step:

3. Novelty (Article 33(2) PCT)

- The subject-matter of claims 10-13 is not new for the following reasons (Article 33(2) PCT):
- Document D1 describes a rinse off hair treatment composition comprising from 0.4-19.5 wt% of a salt selected from the group consisting of alkali metal sulphate for straightening and/or lengthening hair (Cf. D1, page 2, paragraph 2-last paragraph; page 7, paragraph 3-paragraph 4; table 1).

The subject-matter of document D1 takes away novelty of present claims 10-13.

- Document D3 describes a rinse off hair treatment composition comprising from 0.4-19.5 wt% of a salt selected from the group consisting of alkali metal sulphate, i.e. anhydrous sodium sulphate for straightening and/or lengthening hair. The compositions described in document D3 are free of sodium chloride (Cf. D3, column 1, lines 30-34; column 3, lines 16-75; examples 1,3).

The subject-matter of document D3 takes away novelty of present claims 10-13.

4. Inventive Step (Article 33(1),(3) PCT)

a - Since the subject-matter of present claims 10-13 is considered as not novel, obviously it can not be considered as being inventive (Article 33(1),(3) PCT).

b - The remaining novel subject-matter, which is the subject-matter of claims 1-9 cannot be considered as being inventive for the following reasons (Article 33(1),(3) PCT):

- The subjective problem to be solved by the present application is to provide a hair treatment composition to straighten hair and in particular to lengthen hair (see application, on page 1, lines 5-7).

- The solution according to the present application consists in a rinse off hair treatment composition comprising from 0.4-19.5 wt% of two salts selected from the group consisting of alkali metal sulphate, ammonium sulphate, alkali metal thiocyanate, ammonium thiocyanate, ammonium tartrate and in which the composition has a pH from 3-9.5 at 25°C (see claim 1).

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EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP2004/008285

- Document D1, which is considered as the closest prior art, describes a rinse off hair treatment composition comprising from 0.4-19.5 wt% of a salt selected from the group consisting of alkali metal sulphate for straightening and/or lengthening hair (Cf. D1, page 2, paragraph 2-last paragraph; page 7, paragraph 3-paragraph 4; table 1).

The difference between the teaching of the closest prior art and the claimed invention appears to be a rinse off hair treatment composition comprising two salts as described in present claim 1.

The subject-matter of present claims 1-9 comes within the scope of the customary practice since it concerns common salts used in hair treatment compositions. Consequently, the subject-matter of present claims 1-9 lack an inventive step (Article 33(1),(3) PCT).

5. Industrial Application (Article 33(4) PCT)

- The subject-matter of present claims 1-13 is considered to be industrially applicable; claims 1-13 therefore, satisfy the criterion set forth in Article 33(4) PCT.

CLAIMS

1. A rinse off hair treatment composition comprising:
- 5 i) from 0.4 wt% to 19.5wt% of two salts selected from the group consisting of alkali metal sulphate, ammonium sulphate, alkali metal thiocyanate, ammonium thiocyanate ammonium tartrate; and in which the composition has a pH from 3 to 9.5 at 25°C.
- 10
2. A rinse off hair treatment composition according to claim 1 further comprising 1 wt% of a surfactant.
- 15
3. A rinse off hair treatment composition according to claim 2 in which the surfactant is an anionic surfactant.
- 20
4. A rinse off hair treatment composition according to any preceding claim in which the salt is a sodium salt.
- 25
5. A rinse off hair treatment composition according to claim 4 in which the sodium salt comprises sodium sulphate.
- 30
6. A rinse off hair treatment composition according to claim 7 which comprises two salts from the group consisting of:
- sodium sulphate and sodium thiocyanate,
- sodium sulphate and sodium tartrate,
- sodium thiocyanate and sodium tartrate

Claims amended 28/01/2005

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7. A rinse off hair treatment composition according to any preceding claim which comprises of a combination of sodium sulphate and sodium tartrate.
- 5 8. A rinse off hair treatment composition according to any preceding claim which comprises less than 0.1wt% of the total formulation of sodium chloride.
- 10 9. A rinse off hair treatment composition according to any preceding claim which comprises an aqueous base.
- 15 10. Use of alkali metal sulphate, ammonium sulphate, alkali metal thiocyanate, ammonium thiocyanate, alkali metal tartrate or ammonium tartrate or mixtures thereof for straightening hair.
- 20 11. Use of alkali metal sulphate, ammonium sulphate, alkali metal thiocyanate, ammonium thiocyanate, alkali metal tartrate or ammonium tartrate or mixtures thereof for lengthening hair.

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12. A method of lengthening and/or straightening hair by
applying to the hair a composition comprising a salt
selected from the group consisting of alkali metal
sulphate, ammonium sulphate, alkali metal thiocyanate,
ammonium thiocyanate, alkali metal tartrate or
ammonium tartrate and mixtures thereof.

13. A method of lowering the volume and/or re-aligning the
hair by applying to the hair a composition comprising a
salt selected from the group consisting of alkali metal
sulphate, ammonium sulphate, alkali metal thiocyanate,
ammonium thiocyanate, alkali metal tartrate or ammonium
tartrate and mixtures thereof.